Summary of Striving Readers Projects:
Profile of Portland School District's Striving Readers Project and Evaluation_____

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Setting

In the first year of implementation, four high schools and five middle schools participated in the Portland Striving Readers grant. Before the start of the second year of implementation, the district reconfigured two of the middle schools in the study, with the students in those schools allocated to two K – 8 schools. As a result, in Year 2 (2007-08), four high schools, two middle schools, and two K-* schools participated in the grant program. All of these schools receive Title I funding and an average of 65 percent of the students in these schools are identified as low income. All 10 schools have a substantial number of students struggling to read; on average, 28 percent of the students served by these schools are reading at least two years below grade level. None of the schools had achieved Adequate Yearly Progress under No Child Left Behind at the time of the Striving Readers application in 2005. Fifteen percent of the students in the 10 schools are identified as English Language Learners, and 59 percent are non-white. Overall, Striving Readers is expected to affect more than 6,400 students and 450 teachers in the 10 participating schools.

Intervention Models _____

Targeted Intervention

Classroom Model as Planned: Xtreme Reading, developed by the University of Kansas' Center for Research on Learning as one level of instruction in the Content Literacy Curriculum, a framework within the Strategic Interventions Model (SIM). The Xtreme Reading program focuses on 7 reading strategies: Vocabulary, LINCing, Word Mapping, Word Identification, Self-Questioning, Visual Imagery, Paraphrasing, and Inference. Xtreme Reading's core instructional approaches include direct instruction, teacher modeling, paired student practice, and independent practice. The program provides end-of-unit assessments to track student progress.

In the first 2 years of the project, each Xtreme Reading class was co-taught by two teachers—one reading specialist trained on Xtreme Reading and one content specialist. In a typical high school, the two-teacher team taught Xtreme Reading and Language Arts (2 class periods) to 9th graders in the morning, and Xtreme Reading and Language Arts (2 class periods) to 10th graders in the afternoon. In Year 3 of implementation, classroom staffing was modified so that the Xtreme Reading classes were taught by a single teacher trained on the intervention.

Professional Development Model as Planned: Teachers new to Xtreme Reading are offered approximately 67 hours of professional development, which is provided by Strategic Learning Center (SLC), professional developers under contract to the model developer. The training includes 5 days of initial workshops and 6 follow-up training workshops. In addition, each Xtreme Reading teacher receives 8 in-class visits from the SLC trainer to provide additional technical assistance. In the second year of implementation, teachers do not have an initial set of workshops but are offered 10 monthly meetings from SLC, which together cover approximately 40 hours of training. Teachers are offered 4 in-class visits from the SLC trainer in their second year.

Context for Implementation: Xtreme Reading is offered to struggling readers in middle school and high school (grades 7–10). In Year 1 of implementation, this included 5 middle schools and 4 high schools. In Year 2 (2007-08), the district reconfigured two of the middle schools, resulting in a sample of 3 middle schools, 4 high schools, and 2 K–8 schools. Xtreme Reading is being implemented as a replacement for the district's regular English Language arts curriculum for students in middle school (grades 7 and 8) and as a supplement that replaces an elective course for students in high school (grades 9 and 10). Eligible students are students reading at least two years below grade level as measured either by the student's Oregon State Assessment Test (OSAT) total reading score or by his or her Group Reading Assessment and Diagnostic Evaluation (GRADE) total reading score. The previous year's spring OSAT score is used as the primary criterion for eligibility unless the student was new to the district or a spring OSAT score is not available. Potential targeted intervention participants with no OSAT scores are administered the GRADE to determine eligibility for random assignment. Special education students are included in the sample unless their Individual Education Plans (IEPs) prohibit them from being able to be scheduled for the Xtreme Reading classes. Students are eligible to receive Xtreme Reading for a single school year. In the first year of implementation, approximately 275 students were assigned to Xtreme Reading classes in grades 7-10. In the second year of implementation, approximately 350 students were assigned to Xtreme Reading in these same grades. The targeted intervention will be implemented for a total of four years.

Whole School Intervention

Classroom Model as Planned: The Strategic Instruction Model (SIM) Content Enhancement Routines for Teachers (SIM-CERT) is a school-wide literacy-across-the-curriculum intervention developed by the Center for Research on Learning at the University of Kansas as part of the Content Literacy Continuum (CLC). The intervention, SIM-CERT, is organized around a set of Content Enhancement Routines that teachers are trained to use in their instruction to help ensure insure mastery of critical content for all students (Level 1 of CLC) and to provide embedded learning strategy instruction in core curriculum courses (Level 2 of CLC). In Year 1 of implementation, language arts and social studies teachers received training on the use of the content enhancement routines: Unit Organizer, Framing, Vocabulary LINCing, and Concept Mastery. In Year 2 of implementation, math teachers were introduced to the Unit Organizer and Framing content enhancement routines, and science teachers were introduced to the Framing, Concept Mastery, and the new Chapter Survey routines. The professional developers also offered optional training on the Concept Anchoring, Concept Comparison, Lesson Organizer, and Course Organizer content enhancement routines.

In Portland, the whole school model is phased in over three years. In Year 1 (2006-07), language arts and social studies teachers are trained to deliver instruction in the whole school model; science and math teachers are trained in Year 2 of implementation; health, PE, and arts teachers are trained in the third year. Special education, ESL, and other subject area teachers could participate in training at their discretion.

Professional Development Model as Planned: Teachers new to SIM-CERT are offered approximately 55 hours of professional development, which is provided by Strategic Learning Center (SLC), a professional developer under contract to the model developer. The training includes group training on the Content Enhancement Routines and ongoing professional development in which teachers select from a menu of training sessions on new content enhancement routines. In addition, SIM-CERT teachers receive in-school coaching from district literacy coaches and the professional developers, which constitutes approximately 44 hours/teacher of individual technical assistance. After the first year of implementation, the amount of group professional development is variable, depending on which Content Enhancement Routines school administrators elect to have their teachers trained on. The in-class coaching continues at the same level in the second year of implementation.

Context for Implementation: The whole school intervention is offered to all students in participating schools, including students in grades 6-12. In Year 1, this included students in 5 middle schools and 4 high schools. In Year 2 of implementation, the district reconfigured some of the schools, resulting in a sample of 3 middle schools, 4 high schools, and 2 K – 8 schools. The total number of students receiving SIM-CERT is approximately 4,200 students in each school year. The whole school intervention will be implemented for a total of five years.

Evaluation Design _____

Targeted Intervention
Research Questions:
1. What is the impact of Xtreme Reading on student reading achievement for students reading at least two grades below grade level?
2. What is the impact of Xtreme Reading on student motivation and confidence in reading?

Research Design and Methods: Prior to the start of each school year, eligible students in Grades 7–10 are randomly assigned to either the Xtreme Reading group or the control group. The Xtreme Reading curriculum covers one school year; after the treatment year, students originally placed in the control group are eligible to participate in the Xtreme Reading class. The impact of Xtreme Reading on student outcomes will be modeled using ANCOVA. Models will test the effect of Xtreme Reading on achievement score gains, controlling for pre-intervention reading levels and other covariates, as well as school and cohort effects.

Control Condition: Students reading at least two years below grade level who are not randomly assigned to the treatment group receive the district's regular English language arts

curriculum (Grades 7–8) or an elective course (Grades 9–10). After one year in the control condition, if still eligible, students can enroll in the Xtreme Reading class.

Sample Size: Across Years 1 and 2 of implementation, on the GRADE, in the 5 middle/K-8 schools, the evaluation included 209 7th and 8th grade treatment students and 234 control students. In the 4 high schools, the evaluation included 174 9th and 10th grade treatment students and 232 control students.

Key Measures of Student Reading Outcomes (Source):
Oregon State Assessment Test (OSAT) (State Test)
Group Reading Assessment and Diagnostic Evaluation (GRADE) (External Test Publisher)

Whole School Intervention

Research Questions:
1. What is the effect of the Content Enhancement Routines on student reading achievement for all students in the school?

Research Design and Methods: An interrupted time series approach will be used to estimate the change in reading achievement observed prior to and after the implementation of the Content Enhancement Routines. These models will account for within-student repeated measures over time.
Future evaluation reports will include findings on the impact of the whole school intervention on student achievement. The interrupted time series evaluation design is made more rigorous with the inclusion of more than two years of post-implementation data.

Comparison Group: All schools in the study participate in the whole school intervention. Therefore, there is no comparison group.

Sample Size: All Grade 6–12 students in the 9 participating schools will be included in the evaluation of the whole school intervention, for an overall sample size of between 700 and 800 students per year.

Key Measures of Student Reading Outcomes (Source):
Oregon State Assessment Test (OSAT) (State Test)

Year 2 Evaluation Findings _____

Targeted Intervention

Fidelity of Implementation of the Targeted Intervention Model: In terms of fidelity of implementation of the *professional development model*, in Year 1 of implementation, 45% of the nine schools had a high level of participation by teachers in the professional development activities. A larger proportion of the middle schools, 60%, compared with 25% of the high schools, were judged to have a high level of participation by teachers. In the second year of implementation, fidelity increased substantially. Nearly all (89%) of schools had a high level of

participation by teachers in the professional development activities, and this included 100% of the middle schools and 75% of the high schools.

In terms of fidelity of implementation of the *classroom model*, fidelity was rated as low, medium, or high, based on a combination of classroom observations and staff surveys. In Year 1 of implementation, most of the schools implemented the Xtreme Reading classroom model with medium (33%) or high fidelity (45%). The overall fidelity of implementation declined somewhat in the second year of implementation, with only 25% of schools at a high level of fidelity and 38% of schools at a medium level of fidelity.

Impact of the Targeted Interventions on Student Reading Outcomes: There was a significant impact of Xtreme Reading on the reading achievement of the 7th and 8th grade struggling readers, on the GRADE and on the Oregon State Assessment Test. The effect sizes of the impacts were .29 and .13, respectively. There were no significant impacts on the reading scores of the 9th and 10th grade struggling readers; on the GRADE, the effect size was .01, and on the Oregon State Assessment Test, the effect size was -.05.

Whole School Intervention
Fidelity of Implementation of the Whole School Intervention Model: In terms of fidelity of implementation of the *professional development model*, in Year 1 of implementation, none of the schools reached a high level of fidelity, although 80% of the middle schools and 75% of the high schools were at a medium level of fidelity. In the second year of implementation, the middle schools had the same level of fidelity, but the fidelity of implementation rose among the high schools. Half of the high schools were at a high level of fidelity and the other half were at a medium level of fidelity.

Summary of the Strengths and Weaknesses of the Impact Evaluation of the Targeted Intervention:
Strengths
- Eligibility for random assignment was determined systematically, using a predetermined cutoff score on a test of reading achievement (Oregon State Assessment Test (OSAT) or Degrees of Reading Power (DRP)).

- Random assignment was faithfully executed, with no evidence of students receiving the intervention after being randomized to the control condition.

- There is no evidence that there are other factors (e.g., other reading programs or district policies) that were implemented in ways that would undermine the evaluators' ability to attribute impacts to Read 180.

- The evaluation employs two reading tests as outcome measures. The first (GRADE) assesses vocabulary, comprehension, and oral language and was developed by an external test publisher. The second (OSAT) assesses reading and literature, and was developed by the state. There is no reason to believe that students assigned to the treatment group have more experience taking the test than do the control group students,

or that the test measures skills specific to the intervention, both of which could undermine confidence in the impact estimates.

- Few students from the sample of middle school students were unable to participate in follow-up data collection, suggesting that the integrity of the original randomized design was preserved, and that the treatment and control groups continue to be statistically equivalent on all measured and unmeasured characteristics at follow-up. However, in the middle school sample, small, statistically significant differences in pre-study reading achievement (GRADE) favoring the treatment group were noted on the students included in the analysis at follow-up. The effects of this difference are mitigated by the inclusion of the pre-test measure in the statistical models estimating the impact of the program.

- When estimating impacts, appropriate analytic steps were taken to account for the clustering of students within schools.

Weaknesses

- In the sample of high school students, 44.5% of the students were unable to participate in follow-up data collection. The rate of attrition was different in the treatment and control group (51.4% versus 38.0% respectively). The 13.4 percentage point difference in the attrition rate is high by convention, suggesting that the integrity of the randomized design may have been damaged, and that treatment and control groups may no longer be statistically equivalent on all measured and unmeasured characteristics at follow-up. With respect to measured characteristics, however, there were no differences on any pre-study measures of reading achievement or demographic characteristics between treatment and control group students in the analytic sample of high school students.

- The year two evaluation report, which includes findings from the first two years of implementation, includes a sample of high school students large enough to detect an impact (in standard deviation units) of the intervention on reading achievement equivalent to .13 on the GRADE and .12 on the OSAT.[1] Because Portland plans to offer the intervention to new groups of students for four school years, future reports will have larger sample sizes and be able to detect smaller impacts.

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[1] Abt Associates staff calculated the MDE by multiplying the standard error of the impact estimate by 2.8. This calculation produces the MDE for a two-tailed test with 80% power, and with an alpha level of .05, and accounts for clustering and for the inclusion of the covariates in the model.